



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8**

1595 Wynkoop Street
Denver, Colorado 80202-1129
Phone 800-227-8917
www.epa.gov/region8

Ref: 8ENF-W-SD

June 3, 2022

SENT VIA EMAIL
RETURN RECEIPT REQUESTED

Eric Kittinger, Senior Regulatory Manager
Merit Energy Company, LLC (Permittee and Operator of Record)
13727 Noel Road, Suite 1200
Dallas, TX 75240
Email: Eric.Kittinger@meritenergy.com

Re: Underground Injection Control (UIC); Approval of Plugging and Abandonment (P&A) Plan for
Seven Class II Injection Wells Circle Ridge Field, Fremont County, Wyoming

Dear Mr. Kittinger:

On June 1, 2022, the U.S. Environmental Protection Agency received from Permittee and Operator of Record additional revisions to seven proposed P&A plans. These are revisions made to P&A plans for these wells previously approved by the EPA on April 5, 2022, and are limited to a reduced amount of cement placed on top of the cast iron cement retainer to be installed in each well above the injection interval. The revised P&A plans, which address the seven wells listed below, have been reviewed and are approved.

Well Name	EPA Permit/ID Number	API Number	P&A Plan Date
Shoshone 65-20	WY20000-02169	49-013-06833	June 1, 2022
Shoshone 65-25	WY20000-02170	49-013-06830	June 1, 2022
Shoshone 65-38	WY20000-02177	49-013-06845	June 1, 2022
Shoshone 65-41	WY20000-02179	49-013-06839	June 1, 2022
Shoshone 65-42	WY20000-02182	49-013-06851	June 1, 2022
Shoshone 65-77A	WY20521-02119	49-013-21637	June 1, 2022
Shoshone 65-68	WY20837-02175	49-013-21497	June 1, 2022

Within sixty (60) days of plugging a well, please complete and submit to the EPA a plugging record as required by Title 40 of the Code of Federal Regulations Section 144.28(k), or as required by the above-referenced permits at part II(E). The link to the EPA form to use (EPA Form 7520-19) is found at <https://www.epa.gov/uic/underground-injection-control-reporting-forms-owners-or-operators>.

Any failure to comply with the UIC regulations or a UIC permit is subject to enforcement by the EPA, as provided in section 1423 of the Safe Drinking Water Act, 42 U.S.C. § 300(h)(2).

If you have any questions about this letter, please contact me by telephone at (303) 312-6211 or email at wisner.nathan@epa.gov. Please direct any U.S. mail in this matter to my attention at Mail Code 8ENF-W-SD.

Sincerely,

NATHAN WISER

Digitally signed by NATHAN

WISER

Date: 2022.06.03 11:41:16 -06'00'

Nathan Wiser, UIC Program
Safe Drinking Water Enforcement Branch
Enforcement and Compliance Assurance Division

Enclosures (7 Plugging and Abandonment Plans)

cc: John St. Clair, Chairman
Eastern Shoshone Tribe
jstclair@easternshoshone.org

Phoebe Wilson, Tribal Admin Assistant
Eastern Shoshone Tribe
pawilson@easternshoshone.org

Jordan Dresser, Chairman
Northern Arapaho Tribe
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Dean Goggles, Environmental Director
Northern Arapaho Tribe
dean.goggles@northernarapaho.com



MERIT ENERGY COMPANY

Shoshone 65-20

Plug and Abandonment Procedure

Well Information

Field: Circle Ridge
 County: Fremont County, Wyoming
 Legal: 330' FSL & 1,060' FEL Section 36 T7N R3W
 Lat/Long: 43.5336, -109.05592
 API #: 4901306833

Ground level elevation	7,217'	KB Elevation:	7,229'
TD:	1,148'	PBTD:	1,148'
Surface Casing:	9-5/8", 25.7 #/ft, @ 74'		
Surface Casing Cement:	75 sx		
Surface Casing TOC:	Surface	Source:	Drilling Report
Production Casing; Liner:	5-1/2" 14.0 #/ft, J-55, @ 905' 4-1/2" 11.6 #/ft, K-55 @ 847'		
Production Casing Cement Liner Cement	75 sx 55 sx Class G		
Production Casing TOC Liner TOC	567' Surface	Source:	Calculation Workover Report
Production Tubing	2-7/8" 6.5 #/ft tubing and packer		
Open perforations	Phosphoria OH: 905' – 1,148'		
Well Status	Shut In Injector		

Note: All cement pumped for this procedure will be 15.8 ppg Class G neat cement with a yield of 1.16 cu. Ft/sk and .3% by weight dispersant added.

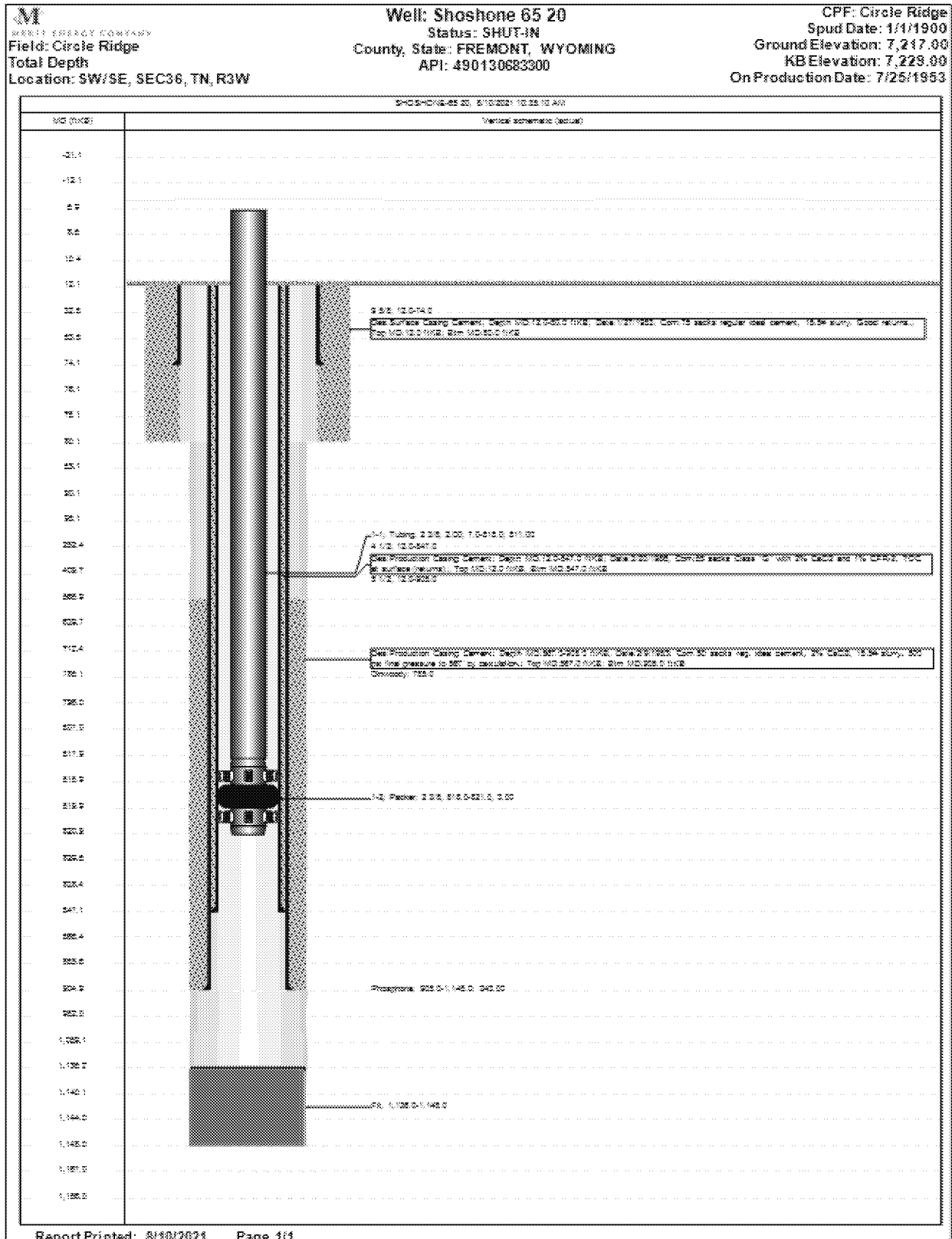
Plugging Procedure

1. MIRU, pull all tubing, packers, rods, and pumps out of hole.
2. Run Bit and Scraper to the bottom of the liner @ 847'.
3. Set CICR 50' above the bottom of the liner at 797'.
4. Pump 1.5x wellbore volume (40 sx) of cement below CICR.
5. Sting out of CICR, pump 10 sx on top of retainer
6. ~~WOC 24 hours.~~
7. Pressure test casing to a minimum of 500 psi for 10 minutes.
8. Perforate at 525' thru 4.5" Liner and 5.5" production CSG.
9. Squeeze cement behind 5.5" csg from 525' to surface and then balance cmt plug inside 4.5" liner to surface.
10. WOC 24 hours. If cement level has fallen top off production casing with cement back to surface utilizing 1" poly hose.
12. Cut casing 3' below grade and weld on dry hole plate w/ legal ID. Remove rig anchors.



MERIT ENERGY COMPANY

Wellbore Diagram





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Shoshone 65-25

Plug and Abandonment Procedure

Well Information

Field: Circle Ridge
 County: Fremont County, Wyoming
 Legal: 253' FSL & 312' FEL Section 36 T7N R3W
 Lat/Long: 43.53389, -109.05815
 API #: 4901306830

Ground level elevation	7,215'	KB Elevation:	7,224'
TD:	2,450'	PBTD:	1,470'
Surface Casing:	10-3/4", 32.75 #/ft, H-40 @ 164'		
Surface Casing Cement:	100 sx		
Surface Casing TOC:	Surface	Source:	Drilling Report
Production Casing; Liner	5-1/2", 14.0 #/ft, J-55, @ 1,214' 4-1/2", 11.6 #/ft, K-55 @ 1,137'		
Production Casing Cement Liner Cement	85 sx 52 sx Class G		
Production Casing TOC Liner TOC	Surface (Remedial Job) Surface	Source:	Workover Report Workover Report
Production Tubing	2-7/8" 6.5 #/ft tubing and packer		
Open perforations	Phosphoria OH: 1,214' – 1,470'		
Well Status	Shut In Injector		

Note: All cement pumped for this procedure will be 15.8 ppg Class G neat cement with a yield of 1.16 cu. Ft/sk and .3% by weight dispersant added.

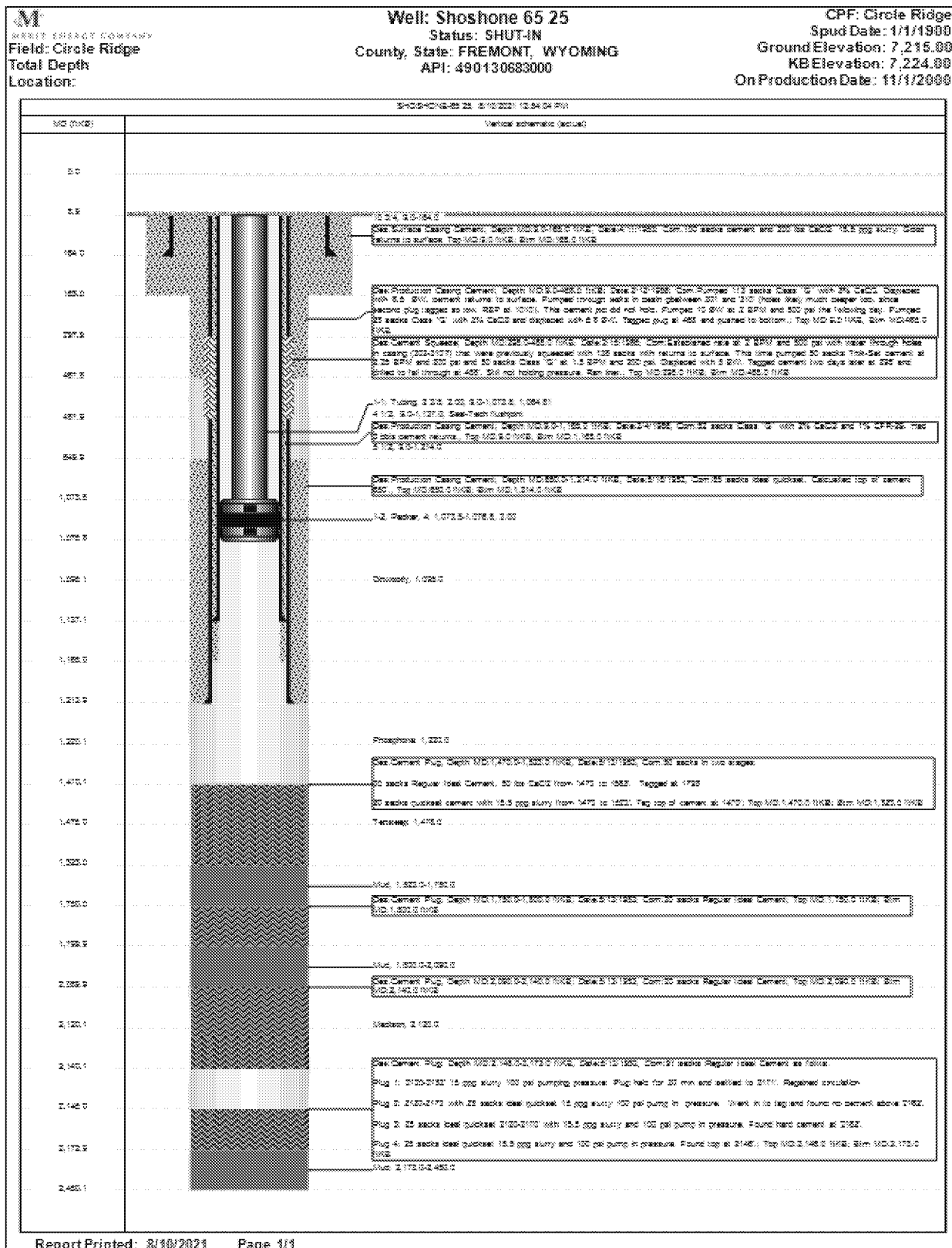
Plugging Procedure

1. MIRU, pull all tubing, packers, rods, and pumps out of hole.
2. Run Bit and Scraper to the bottom of the liner at 1,137'.
3. Set CICR 50' above the top of the openhole section at 1,087'.
4. Sting into CICR and pump 1.5x wellbore volume (135 sx) of cement below CICR.
5. Sting out of CICR, pump 10 sx on top of retainer.
6. WOC 24 hours.
7. Pressure test production casing to a minimum of 500 psi for 10 minutes.
8. Pump balanced plug from 200' to surface inside production casing.
9. WOC 24 hours. If cement level has fallen top off production casing with cement back to surface utilizing 1" poly hose.
10. Cut casing 3' below grade and weld on dry hole plate w/ legal ID. Remove rig anchors.



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Wellbore Diagram





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Shoshone 65-38

Plug and Abandonment Procedure

Well Information

Field: Circle Ridge
 County: Fremont County, Wyoming
 Legal: 0' FNL & 0' FEL Section 36 T7N R3W
 Lat/Long: 43.5354, -109.05777
 API #: 4901306845

Ground level elevation	7,229'	KB Elevation:	7,238'
TD:	4,030'	PBTD:	1,192'
Surface Casing:	13-3/8" 48.0 #/ft @ 154'		
Surface Casing Cement:	100 sx		
Surface Casing TOC:	Surface	Source:	Drilling Report
Production Casing:	5-1/2" 14.0, 15.5, & 17.0 #/ft @ 1,217'		
Production Casing Cement	100 sx		
Production Casing TOC	715' Surface (Remedial Job)	Source:	Calculation Workover Rpt (05/2015)
Production Tubing	2-7/8" 6.5 #/ft tubing and packer		
Open perforations	Embar: 882' – 1,152'		
Well Status	Shut In Injector		

Note: All cement pumped for this procedure will be 15.8 ppg Class G neat cement with a yield of 1.16 cu. Ft/sk and .3% by weight dispersant added.

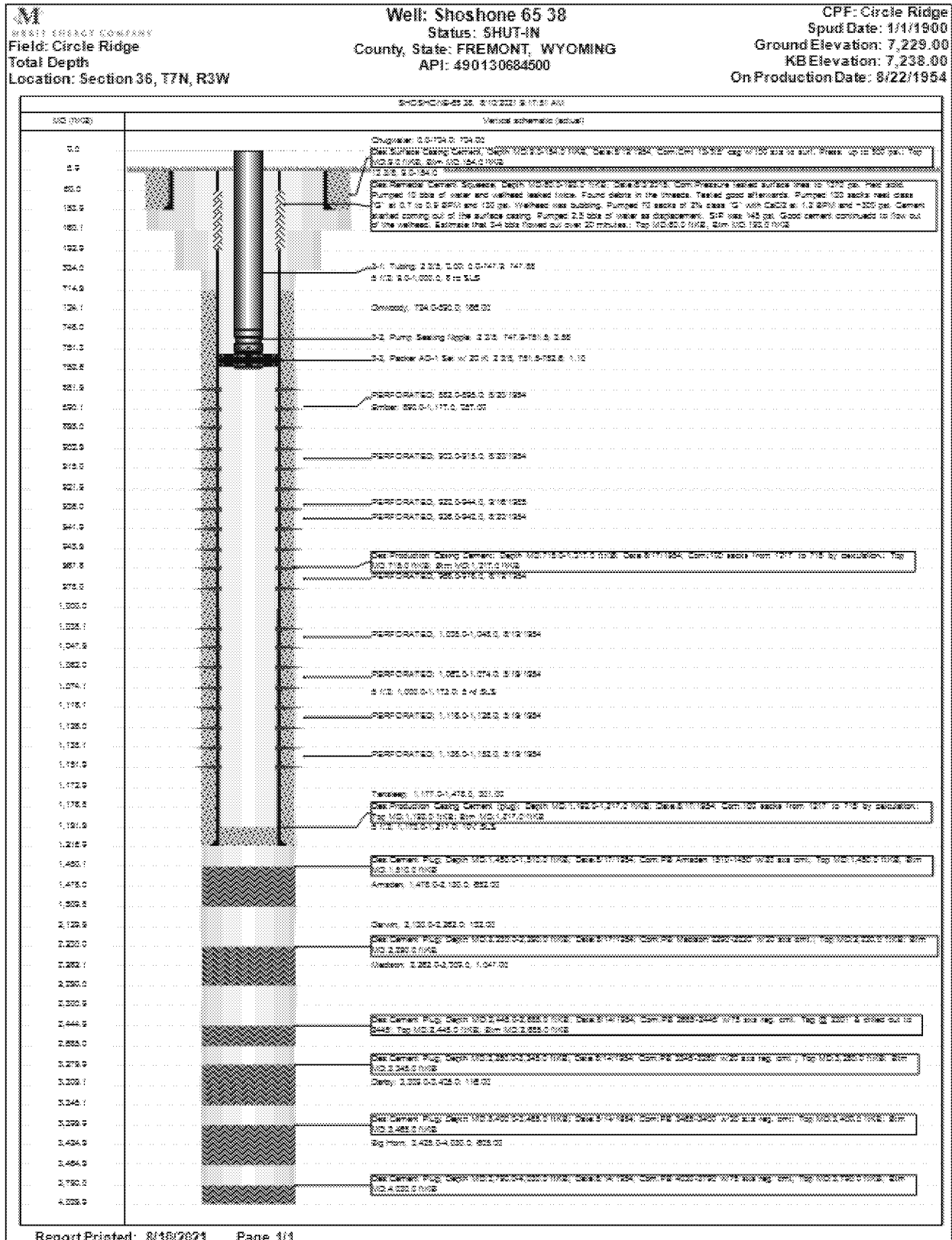
Plugging Procedure

1. MIRU, pull all tubing, packers, rods, and pumps out of hole.
2. Run Bit and Scraper to PBTD.
3. Set CICR 50' above the top perforation @ 832'.
4. Pump 1.5x wellbore volume (60 sx) of cement below CICR.
5. Sting out of CICR, pump 25 sx on top of retainer.
- ~~6. WOC 24 hours.~~
7. Pressure test production casing to a minimum of 500 psi for 10 minutes.
8. RIH with 2 3/8" 4.9#/ft tubing to 200' below surface.
9. Pump balance plug from 200' to surface inside production casing.
10. WOC 24 hours. If cement level has fallen top off production casing with cement back to surface utilizing 1" poly hose.
11. Cut casing 3' below grade and weld on dry hole plate w/ legal ID. Remove rig anchors.



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Wellbore Diagram





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Shoshone 65-41

Plug and Abandonment Procedure

Well Information

Field: Circle Ridge
 County: Fremont County, Wyoming
 Legal: 330' FSL & 2,310' FEL Section 36 T7N R3W
 Lat/Long: 43.5336, -109.06064
 API #: 4901306839

Ground level elevation	7,195'	KB Elevation:	7,204'
TD:	1,706'	PBTD:	1,490'
Surface Casing:	None		
Surface Casing Cement:	N/A		
Surface Casing TOC:	N/A	Source:	N/A
Production Casing; Liner:	5-1/2" 14.0 #/ft, J-55, @ 1,693' 4-1/2" 11.6 #/ft, K-55 @ 1,261'		
Production Casing Cement Liner Cement	100 sx Stratalite cement through shoe + 90 sx Regular through 2 stage at 1,267' 55 sx Class G		
Production Casing TOC Liner TOC	432' Surface	Source:	Calculation Workover Report
Production Tubing	2-7/8" 6.5 #/ft tubing and packer		
Open perforations	Embar: 1,308' – 1,406' Embar: 1,544' – 1,660' (TA'd under permanent bridge plug @ 1,490')		
Well Status	Shut In Injector		

Note: All cement pumped for this procedure will be 15.8 ppg Class G neat cement with a yield of 1.16 cu. Ft/sk and .3% by weight dispersant added.

Plugging Procedure

1. MIRU, pull all tubing, packers, rods, and pumps out of hole.
2. Run Bit and Scraper to the bottom of the liner @ 1,261'.
3. Set CICR 50' above the the bottom of the liner at 1,211'.
4. Pump 1.5x wellbore volume (35 sx) of cement below CICR.
5. Sting out of CICR, pump 10 sx on top of retainer
6. WOC 24 hours.
7. Pressure test production casing to a minimum of 500 psi for 10 minutes.
8. Perforate at 400' thru 4.5" Liner and 5.5" production CSG.
9. Pump 1.5x wellbore and 5.5"x4.5" annular volume of cement to surface through 5.5" leaving balanced plug inside 4.5" to surface.
10. WOC 24 hours. If cement level has fallen top off production casing with cement back to surface utilizing 1" poly hose.
11. Cut casing 3' below grade and weld on dry hole plate w/ legal ID. Remove rig anchors.

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Shoshone 65-42

Plug and Abandonment Procedure

Well Information

Field: Circle Ridge
 County: Fremont County, Wyoming
 Legal: 1,677' FSL & 2,350' FEL Section 36 T7N R3W
 Lat/Long: 43.53728, -109.06079
 API #: 4901306851

Ground level elevation	7,254'	KB Elevation:	7,263'
TD:	1,150'	PBTD:	1,124'
Surface Casing:	None		
Surface Casing Cement:	N/A		
Surface Casing TOC:	N/A	Source:	N/A
Production Casing:	5-1/2" 14.0 #/ft @ 1,149'		
Production Casing Cement	70 sx Stratalite cement through shoe 70 sx Regular through 2 stage at 827'		
Production Casing TOC	362'	Source:	Calculation
Production Tubing	2-7/8" 6.5 #/ft tubing and packer		
Open perforations	Embar: 854' – 1,114'		
Well Status	Shut In Injector		

Note: All cement pumped for this procedure will be 15.8 ppg Class G neat cement with a yield of 1.16 cu. Ft/sk and .3% by weight dispersant added.

Plugging Procedure

1. MIRU, pull all tubing, packers, rods, and pumps out of hole.
2. Run Bit and Scraper to PBTD.
3. Set CICR 50' above the top perf @ 804'.
4. Pump 1.5x wellbore volume (55_sx) of cement below CICR.
5. Sting out of CICR, pump 10 sx on top of retainer.
- ~~6. WOC 24 hours.~~
7. Pressure test production casing to a minimum of 500 psi for 10 minutes.
8. Perforate circulation hole 200' from surface in production casing.
9. RIH with 2 3/8" 4.9# tubing to 190' below surface and circulate cement to surface outside Production casing through perforation.
10. Pump balanced plug to surface inside production casing.
11. WOC 24 hours. If cement level has fallen top off production casing with cement back to surface utilizing 1" poly hose.
12. Cut casing 3' below grade and weld on dry hole plate w/ legal ID. Remove rig anchors.



M
MAST ENERGY COMPANY
Field: Circle Ridge
Total Depth
Location: NW/SE, SEC 36, T7N,
R21W

Well: Shoshone 65 42
Status: SHUT-IN
County, State: FREMONT, WYOMING
API: 490130885100

CPF: Circle Ridge
Spud Date: 1/1/1900
Ground Elevation: 7,254.80
KB Elevation: 7,265.80
On Production Date: 1/1/1997

SHOSHO65-42 42, 8/10/2021 10:21:50 AM

MD (ft)	Vertical schematic (actual)
7.2	
11.2	
281.9	<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>7.2 Tubing, 2.315, 2.001, 8.0-703.0, 775.00</p> <p>5 1/2, 11.0-1,149.0</p> </div> <div style="width: 65%;"> <p>See Production Logging Cement: Depth MD 282.0-287.0 HWS, Date 12/8/1994, Conn to sack: sack cement through 2-stage collar at 287. Cement top at 282 by production. Trace of shrinkable cement in volume. Top MD 287.0 HWS, Btm MD 287.0 HWS</p> </div> </div>
722.1	
725.0	<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>7.2 Packer, 5.01, 722.0-725.0, 2.00</p> </div> <div style="width: 65%;"> </div> </div>
827.1	
845.1	
854.0	<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>Stinger, 854.0-1,149.0, 225.00</p> </div> <div style="width: 65%;"> <p>PERFORATED, 845.0-874.0, 10/23/1993</p> <p>PERFORATED, 854.0-875.0, 12/11/1994</p> </div> </div>
874.0	
875.0	
925.1	<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> </div> <div style="width: 65%;"> <p>See Production Logging Cement: Depth MD 927.0-1,150.0 HWS, Date 12/8/1994, Conn to sack: shrinkable cement through shoe. Cement top at 926 collar by production. Top MD 927.0 HWS, Btm MD 1,150.0 HWS</p> </div> </div>
1,000.0	<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> </div> <div style="width: 65%;"> <p>PERFORATED, 995.0-1,010.0, 10/23/1993</p> <p>PERFORATED, 1,000.0-1,010.0, 12/11/1994</p> </div> </div>
1,025.2	
1,070.1	
1,072.0	
1,074.0	<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>PERFORATED, 1,025.0-1,032.0, 12/11/1994</p> <p>PERFORATED, 1,022.0-1,032.0, 10/23/1993</p> </div> <div style="width: 65%;"> </div> </div>
1,075.1	
1,075.1	
1,081.0	<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>PERFORATED, 1,025.0-1,081.0, 12/11/1994</p> </div> <div style="width: 65%;"> </div> </div>
1,095.1	
1,113.5	<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>PERFORATED, 1,025.0-1,114.0, 12/11/1994</p> </div> <div style="width: 65%;"> </div> </div>
1,124.0	<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> </div> <div style="width: 65%;"> <p>See Production Logging Cement (prod): Depth MD 1,124.0-1,150.0 HWS, Date 12/8/1994, Conn to sack: shrinkable cement through shoe. Cement top at 926 collar by production. Top MD 1,124.0 HWS, Btm MD 1,150.0 HWS</p> </div> </div>
1,142.0	
1,145.5	

Report Printed: 8/10/2021
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Shoshone 65-68

Plug and Abandonment Procedure

Well Information

Field: Circle Ridge
 County: Fremont County, Wyoming
 Legal: 1,250' FSL & 2,970' FEL Section 36 T7N R3W
 Lat/Long: 43.53612, -109.06314
 API #: 4901321497

Ground level elevation	7,209'	KB Elevation:	7,219'
TD:	1,720'	PBTD:	1,705'
Surface Casing:	8-5/8", 24 #/ft, K-55, @ 70'		
Surface Casing Cement:	Unknown (Completion report shows cement to surface)		
Surface Casing TOC:	Surface	Source:	Completion Report
Production Casing:	5-1/2", 15.5 #/ft, K-55, @ 1,720'		
Production Casing Cement	210 sx		
Production Casing TOC	315'	Source:	Calculation
Production Tubing	No tubing in the well		
Open perforations	Tensleep Perfs: 1,520' – 1,720' Stuck Packer @ 1,705'		
Well Status	Shut In Injector		

Note: All cement pumped for this procedure will be 15.8 ppg Class G neat cement with a yield of 1.16 cu. Ft/sk and .3% by weight dispersant added.

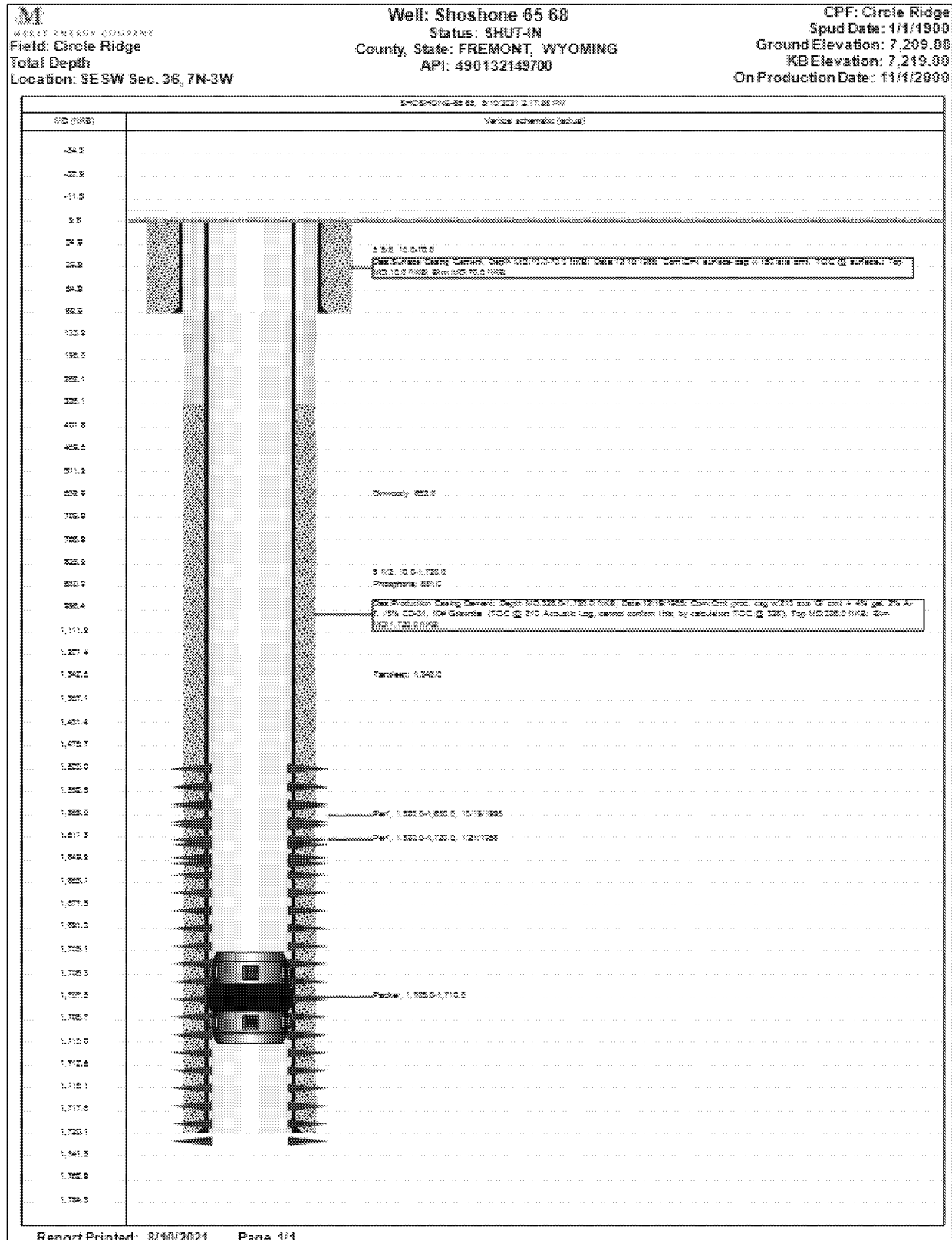
Plugging Procedure

1. MIRU, pull all tubing, packers, rods, and pumps out of hole.
2. Run Bit and Scraper to PBTD.
3. RIH and set CICR 50' above top perforation at 1,470'.
4. Sting into CICR and pump 1.5x wellbore volume (45 sx) of cement below CICR.
5. Sting out of CICR, pump 10 sx on top of retainer.
- ~~6. WOC 24 hours.~~
7. Pressure test production casing to a minimum of 500 psi for 10 minutes.
8. Perforate circulation hole 200' from surface in production casing.
9. RIH with 2-3/8" 4.9# tubing to 190' below surface and circulate cement to surface outside Production casing through perforation.
10. Pump balanced plug to surface inside production casing.
11. WOC 24 hours. If cement level has fallen top off production casing with cement back to surface utilizing 1" poly hose.
12. Cut casing 3' below grade and weld on dry hole plate w/ legal ID. Remove rig anchors.



Well: Shoshone 65 68
Status: SHUT-IN
County, State: FREMONT, WYOMING
API: 490132149700

CPF: Circle Ridge
Spud Date: 1/1/1900
Ground Elevation: 7,209.00
KB Elevation: 7,219.00
On Production Date: 11/1/2000





MERIT ENERGY COMPANY

Shoshone 65-77A

Plug and Abandonment Procedure

Well Information

Field: Circle Ridge
 County: Fremont County, Wyoming
 Legal: 2,074' FSL & 1,444' FEL Section 36 T7N R3W
 Lat/Long: 43.53838, -109.05756
 API #: 4901321637

Ground level elevation	7,294'	KB Elevation:	7,305'
TD:	2,100'	PBTD:	2,069'
Surface Casing:	8-5/8", 24 #/ft, J-55, @ 203'		
Surface Casing Cement:	153 sx Class G cement		
Surface Casing TOC:	Surface	Source:	Drilling Report
Production Casing:	5-1/2", 15.5 #/ft, K-55, @ 2,062'		
Production Casing Cement	392 sx Class G & Thixotropic Cement in 2 stages w/ Stage Tool @ 1,257'		
Production Casing TOC	250'	Source:	CBL
Production Tubing	No tubing in the well		
Open perforations	Tensleep Perfs: 1,960' – 2,049' (TA'd under CICR @ 1,900')		
Well Status	Shut In Injector		

Note: All cement pumped for this procedure will be 15.8 ppg Class G neat cement with a yield of 1.16 cu. Ft/sk and .3% by weight dispersant added.

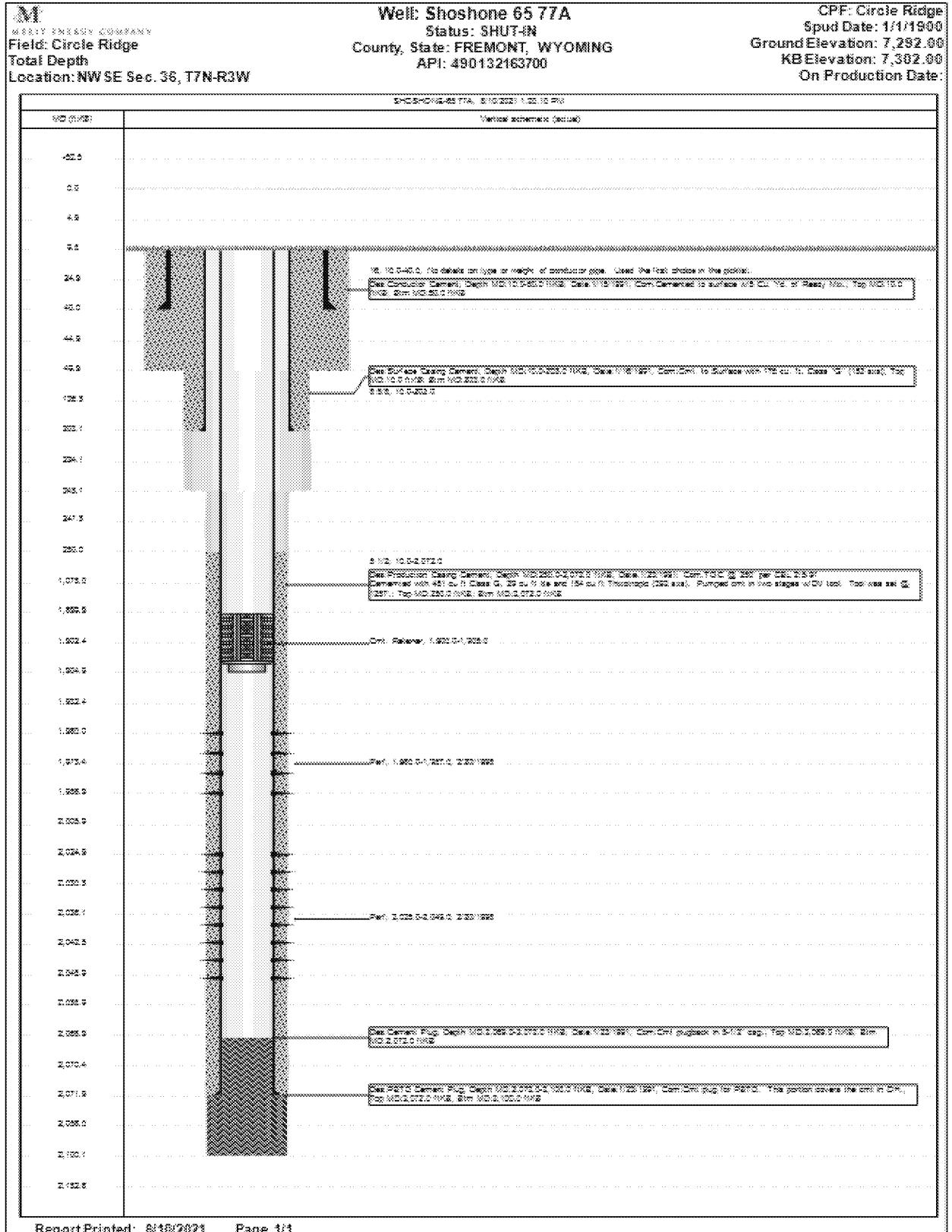
Plugging Procedure

1. MIRU, pull all tubing, packers, rods, and pumps out of hole.
2. Run Bit and Scraper to the top of the CICR @ 1,900'.
3. Sting into CICR and pump 1.5x wellbore volume (30 sx) of cement below CICR.
4. Sting out of CICR, pump 10 sx on top of retainer.
5. ~~WOC 24 hours.~~
6. Move uphole and spot a balanced cement plug from 368-468' with 12 sx cmt of 1.16 yield cement.
7. WOC and tag plug
8. Pressure test production casing to a minimum of 500 psi for 10 minutes.
9. Perforate circulation hole 200' from surface in production casing.
10. RIH with 2-3/8" 4.9# tubing to 190' below surface and circulate cement to surface outside Production casing through perforation.
11. Pump balanced plug to surface inside production casing.
12. WOC 24 hours. If cement level has fallen top off production casing with cement back to surface utilizing 1" poly hose.
13. Cut casing 3' below grade and weld on dry hole plate w/ legal ID. Remove rig anchors.



MERIT ENERGY COMPANY

Wellbore Diagram



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